INTERNATIONAL Railway Journal

EDITORIAL INDEX

January 1964—December 1964

SIMMONS-BOARDMAN PUBLISHING CORPORATION, 30 Church Street, New York, N. Y. 10007

4, Talbot House; 98 St. Martin's Lane, London, WC.2

AUTHORS

Carstens, Ing. G., Dec 38

Dunbar, A. R., Apr 25

Ehlers, Dr. Ing. H. R., Dec 38

Flores, I. Cardona, Aug 25

Lewis, Robert G., Oct 48
Lyne, James G., Feb 44; Oct 94; Nov 62; Dec 58

Rooth, Edward W., Oct 92

Stefaniu, Gheorghe, Sept 32

GENERAL INDEX

**Illustrated Articles*

A

ACF Industries: Outlet Valve, Apr 49*
Accident Prevention:
  BRC Eng. Co. Weldmesh Guards, Oct 88*
  Vapor Corp. Alertor, Aug 42
Advertising Techniques of European RRs, Apr 34*
Aerial Survey of Helwan-Bahariya Oasis Line in Egypt, June 66
Africa: (See also South Africa)
  Braking Systems in, June 34
  East African Rys. & Harbours, Progress on the, June 40*
  Loading Gauges, June 34*
  Standardized Diesel Locomotive Needed, June 33*
After Hours (See Railroading After Hours)
Aga Dictating Machine Co. Ltd.: Remote-Control Dictation System, Sept 47*
Air Brake System; Knorr-Bremse GmbH, Sept 44
Air Conditioning Plant; Luwa GmbH, May 72
Aldon Co.: Car Mover, Oct 86
Alertness Control; Vapor Corp., Aug 42
Aluminum Insulated Container; Gloucester Ry. Carriage & Wagon Co., Dec 42*
Aluminum Track Jack, Sept 45*
American Brake Shoe Co.: Hydraulic Car Retarder, Oct 86*
Argentina:
  Labor Unions Oppose Staff Reductions, Dec 55
  Problems Facing the Railways, June 12
Asia:
  Southeast Asian Rys. Build for Future, Oct 51*
  Westerner Looks at Eastern Rys., Oct 48*
Asociacion Latino Americana de Ferrocarriles Organized, June 70
Atomic Blasting of Mountains Studied by AT&SF, Sept 66
Atomic Power vs. Coal, Dec 58
Australia:
  Commonwealth Govt. Rys. Trans-Australian Express Equipment, Nov 45*
  Gauge Conversion, July 17; Oct 17, 70*
  Melbourne Subway, Surveys for, Sept 7
  New South Wales Govt. Rys. Double-Deck Suburban Cars, June 12*
  RRs Improve Freight and Passenger Service, Jan 40; Oct 70*; Nov 45*
  Statistical Survey of Railways, Sept 49
Austria: Vienna Rapid Transit System, July 39*
Automated Train Operation:
  French Nat. Rys. Suburban Train Tests, June 64
  London Subway Tests, July 32*
  Stockholm Underground Tests, July 35
  Survey of Progress in, Apr 15*
  Swedish Mine Trains, Apr 16*
Automatic Car Identification Technique, Mar 40
Automatic Train Control System on JNR New Tokaido Line, Oct 38
Automatic Train Control with Speed Control; Integra, Feb 37
Automation in Route and Traffic Control, Survey of, Apr 17
Automation (See also Electronic)
Auto-Sleeper Service Booms in France, Nov 59
Axle Bearings; Kugelfischer Georg Schafer & Co., May 68

B

BRC Eng. Co.: Weldmesh Guards, Oct 88*
Ballast Regenerator; Wieger Maschinenbau, Feb 37*
Ballast Scarifiers; David Brown Tractors Ltd., Aug 53*
Battery, Pocket-Type; Yuasa Battery Co., Dec 42*
Bearings, Axle; Kugelfischer Georg Schafer & Co., May 68
Beck & Henkel Maschinenbau AG Car Dumper, May 58
Belgium:
  Belgian National Rys. Coaches Converted to Buffet Cars, Apr 21*
  Brussels Tramways to be Converted to Semi-Subway System, Sept 7
  Crossing Gate of Plastic, Apr 25
  Road-Rail Tunnel Under River Scheldt, Mar 10; Oct 17
  Television to Speed Train Departures, Oct 22
Bochumer Verein Track and Wheelsets, May 58
Bogies (See Trucks)
Bolivia, Railway Crisis in, July 46
Brakes, Disc, Pads for; Jurid Werke GmbH, Dec 38*
Brakes, Friction; Improvement by the Use of Plastics, Dec 38*
Braking Systems in Africa, June 34
Bridge, Britannia Tubular, Repaired, May 8
British Guiana: Demba RR Builds for Growth, Feb 25*
British Insulated Callender's Cables Ltd.: Glass-Fiber Section Insulator, Feb 41*
British Oxygen Co. Ltd.: Mild Steel Cutting Machine, Sept 44
Brown, David, Tractors Ltd.: Ballast Scarifiers, Aug 53*
Budd Co. "International Car", Apr 22*

C

Cable, Co-Axial, for 300 Speech Channels; Telefunken AG, May 78
Canada:
  Canadian National:
    Dining Car Innovations, Aug 50
    EDP System Extended, Nov 13
    Electronic Weighing-in-Motion Scale, Oct 17
    Great Slave Lake Line, Mar 29*; Nov 21
    Passenger Service Improvements, Feb 26*
    Track Laying Machine, Mar 32*
  Canadian Pacific: Passenger Fares Reduced, Feb 27
  Carol Lake Ry. Automated Operation, Apr 15
  Edmonton Subway, Plans for, July 54
  Montreal Subway Construction, July 44
  Rapid Transit System for World Exhibition at Montreal, Nov 11
  Toronto Subway Developments, July 58
Capital Expenditure Programs for 1965, Dec 40
Car Dumper; Beck & Henkel Maschinenbau, May 58
Car Identification, Automatic, Developments in, Mar 40
Car Mover; Aldon Co., Oct 86
Car Pool in East Europe, Apr 44; Aug 50
Car Repairs (See Maintenance of Equipment)
Car Reporting Systems:
  Atlantic Coast Line, Mar 33
  British Rys., Jan 46; Mar 38
  Developments in, Mar 38
  Southern Pacific, Mar 33
Car Retarders:
  Eddy-Current; Swiss Rys. Basel-Muttenz Yard, Nov 43
  Hydraulic; American Brake Shoe, Oct 86*
Car Utilization in USSR Criticized, Sept 32
Cars, Freight:
  British Rys. Double-Deck Car for Motor Vehicles, Nov 59
  Coding, New, in Europe, June 66
  Finnish State Rys., Feb 20*
  Flat, for Transporting Broad and Narrow-Gauge Equipment; Maschinenfabrik Esslingen, May 52*
  French National Rys., June 26*
  German Federal Ry., May 49*
  Gondola, Automatic Central Discharging; Waggonfabrik Talbot, May 50*
  Hopper; Krupp-Ardelt Eight-Axle, May 50*
  Netherlands Rys., Dec 28*
  Refrigerator; German State Rys. Mechanically-Cooled, Feb 35*
  Tank:
    Double-Shell, for Liquid Gas; Linke-Hofmann-Busch, May 52*
    Swedish Car for Two Products, Apr 48
  Transformer, 20-Axle; Rheinstahl Siegener Eisenbahnbedarf, May 52*
Cars, Passenger:
  British Rys. First and Second Class, June 46*
  Czechoslovakian State Rys. Railcar for Branch Lines, Aug 46*
  European RRs Modernize, Apr 19*
  Finnish State Rys., Feb 20*
  French National Rys., June 26*
  German Federal Ry., May 49*; "Rhinegold" Type, Nov 59
  German State Ry., Feb 34*
  Honduras State Rys. Railcars, May 46*
  "International Car"; Budd Co., Apr 22*
  International Sleeping Car Co., May 50*
  Irish Transport Co. Second Class, June 49*
  Jamaica Govt. Ry. Rail Cars, Sept 38*; Dec 53
  JNR New Tokaido Line, Oct 38*
  New South Wales Govt. Rys. Double-Deck Suburban, June 12*
  Swiss Rys. Order Railcars, Sept 25
  Trans-Australian Express Cars, Nov 45*
  UIC Type X Standard Coach, May 49
Catenary Systems in Use, Sept 40*
Cengar Universal Tool Co.: Air-Powered Portable Saw, Feb 37*
Centralized Traffic Control:
  LKAB Mine, Kiruna, Sweden, Oct 92
  Malmbanan Ore Ry., Aug 22*; Correction, Oct 92
Channel Tunnel Project (See English Channel)
Coachscrewing Machine; Ets. Ed. Pouget, Feb 49
Coal vs. Atomic Power, Dec 58
Cobham, Alan, Eng. Ltd.: Dual-Use Valve, Sept 48
Color Schemes, RRs' Use of, Apr 33
Communications System: Lamco Joint Venture RR, June 36*
Competitive Transportation:
  Australian Rys. Offer Attractive Service, Jan 40
  British Rail and Road Costs Compared, July 17
  British Rys.' New Freight Image, Jan 29*
  German Fed. Ry. Uses Specialized Equipment to Meet, Jan 27*; Problems of, May 27*
  Integration—European RRs' Most Powerful Weapon, Jan 21*
  Netherlands Rys. Woo Manufacturers, Jan 38
  Southeast Asian Rys. Build for Future, Oct 51*
  Technological Challenge, The, Jan 16*
  US Rys. Weapons for Fighting, Jan 34*
Computers (See Electronic Data Processing)
Construction Projects:
  Great Slave Lake Line, Canada, Mar 29*; Nov 21
  ICOS-Veder System Used on Milan Metro, July 35*
  JNR Negishi Line, Dec 46*
  London Underground; Victoria Line, July 31
  Paris Metro Extension, July 37*
  Rhodesia Rys. Mbizi-Chiredzi Line, Nov 56*
  Rotterdam Metro, July 38
  Swaziland Ry. Nearing Completion, July 22
  Tunnel on Oslo-Drammen Line of Norwegian State Rys., Nov 47*
Contacts, Multi-Pole; Tuchel-Kontakt GmbH, May 78
Container Service:
  Registration Fee in Europe, Jan 23
  Systems in Use In Europe, Jan 26
  USA-Europe Water-Rail-Highway, Feb 36*
Containers:
  Aluminum Insulated; Gloucester Ry. Carriage & Wagon Co., Dec 42*
  International Standards, Status of, Feb 39
  Side-Loading; German Fed. Ry., Jan 28*
  Steel Cargo; Jeta, Inc., Sept 48
Craig Alford Ltd.: Mobile Floodlight Tower, Sept 46
Cranes:
  Composite Breakdown Vehicle, Aug 41*
  Design for Use on Electrified Lines; Krupp-Ardelt GmbH, May 66*
  Yard, Can Also Move Cars; Eng. Equip. Co., Feb 37*
Craven Brothers Ltd.: Wheel Lathe, Aug 54
Crossing Gate, Plastic, Tested in Belgium, Apr 25
Crossties (See Ties)
Crypton Equip. Ltd.: Fast Charger Engine Starter, Sept 46
Cullen Friestedt Multiple Rail Lifter, Aug 53
Current Collection at High Speeds, Sept 40*
Cybernetics Symposium, Mar 36*
Cylinder, Short Stroke Retarder; Union Switch & Signal Div., Wabco, Sept 48*
Czechoslovakia:
  Czechoslovakian State Rys.:
    Experimental Track Uses Pre-stressed Concrete Shell, Mar 28*
    Locomotives, Class E669 Electric, Aug 48*
    Modernization of, Aug 44*
    Railcar for Branch Lines, Aug 46*
  Locomotive with Plastic Body, Apr 11

D

Davey, Paxman & Co.: Compact Diesel Engine, Feb 49*
Denmark:
  Danish State Rys.:
    Advertising and Publicity Techniques, Apr 38
    Electronic Reservation Systems, June 77 (Seat); Nov 44* (Vehicle Space on Ferries)
    Signaling, Automatic, to be Extended, Sept 10
  Subway Development in, July 31
Design, Identity by, Apr 31*, 34*
Deuta Werke AC Generator, May 58
Deutsche Waggon-und Maschinenfabriken GmbH: Lightweight Coach for German Federal Ry., May 49*
Dictation System, Remote-Control; Aga Dictating Machine Co. Ltd., Sept 47*
Dining Car Innovations on Canadian National, Aug 50

INDEX JANUARY 1964

XU

2

pon.

21
35*

tate
y 78

&

t 46

rdelt
Feb 37*
25
er,

&

ncrete

Feb 49*

38
Seat);
10

H:
..
ing
Aug 50

Disc Brake Pads; Jurid Werke GmbH, Dec 38*
Dyckerhoff & Widmann KG: Prestressed Concrete Ties, May 60

E

East African Rys. & Harbours, Progress on the, June 40*
East European Freight Car Pool, Apr 44; Aug 50
Egypt: Aerial Surveys for Helwan-Bahariya Oasis Line, June 66
Electrification:
British Rys. Plans for Southern and Scottish Regions, Nov 50*
Current Collection at High Speeds, Sept 40*
Finnish State Rys., Feb 19*
German State Ry., Feb 32*
JNR New Tokaido Line, Oct 38*
Netherlands Rys., Dec 28*
Suburban Lines, Calcutta, India, Sept 24*, 50*
Yugoslav Rys., Nov 32*
Electronic Alertness Control; Vapor Corp., Aug 42
Electronic Data Processing:
Aid to Profits, Mar 33*
CN System Extended, Nov 13
CDPC System; Atlantic Coast Line, Mar 33
Coding, New, for European Freight Cars, June 66
Data Processing Centers; British Rys., Mar 60
Information Control System; Western Pacific, Mar 37
Many Uses for, Mar 33*
PERT (Program Evaluation and Review Technique), Mar 48
Timetable Preparation; British Rys., Mar 40
TOPS System; Southern Pacific, Mar 33
Electronic Reservation System for Vehicle Space on Ferries; Danish State Rys., Nov 44*
Electronic Seat Reservation Systems, Mar 40; June 77
Electronic Ticket Control System; Ticket Equip. Ltd., Sept 46
Electronic Ticket Gates; London Transport Board, June 56
Electronic Weighing-in-Motion Scales, Oct 17; Nov 40*
Engine Starter, Fast Charger; Crypton Equip. Ltd., Sept 46
Engineering Equip. Co.: Yard Crane Can Also Move Cars, Feb 37*
Engines, Diesel:
Davey, Paxman 488-800-Hp., Feb 49*
Maschinenfabrik Augsburg-Nurnberg AG Line of, May 43*
Maybach-Motorenbau GmbH—Daimler-Benz AG Collaborate on, May 43*
English Channel Tunnel Project, Apr 25*; Aug 15; Netherlands Rys. Plan Link with, Dec 34 *
Enterprise Ry. Equip. Co.: Hopper Car Discharge Gate, Sept 47
Eurofima:
Credit Granted to Yugoslav RRs, July 21
Loan Oversubscribed, May 13; June 77
Europe:
Coding, New, for Freight Cars, June 66
Importance of Barge Transport in, Jan 23*
Integration—RRs' Most Powerful Weapon, Jan 21*
Motor Vehicle Sizes and Weights, Apr 25
RR Advertising and Publicity Techniques, Apr 34*
USA-Europe Container Service, Feb 36*
Urban Transit Boom, July 28*
European Economic Community:
Common Market Aid for the Congo, Apr 12
Rate Bracket System Proposed, Jan 22
Exhibits:
French Railway Equipment Exhibition, June 21*
Leipzig Spring Fair, Mar 15
Export Market: French Railway Equipment Builders, June 21*

F

Fan Drives for Diesels, Hydrostatic; Suddeutsche Kuhlerfabrik Julius Fr. Behr., May 76*
Fares:
Canadian RRs Reduce, Feb 26
JNR New Tokaido Line, Oct 42
Ferrostaal AG: Railcars for Honduras State Rys., May 46*
Finland:
Finnish State Rys.:
Electrification Plans, Feb 19*
Motive Power and Rolling Stock, Feb 20*
Operating Study, Feb 19*
Trainsets, Feb 21*; Sept 35*
Floodlight Tower, Mobile; Craig Alford Ltd., Sept 46
France:
Channel Tunnel Project, Apr 25*; Aug 15; Dec 34
French National Rys.:
Automated Suburban Trains, June 64
Auto-Sleeper Traffic Boom, Nov 59
Cars, Freight, June 26*
Cars, Passenger, June 26*
Equipment Exhibition, June 21*
Locomotive, 4800-Hp. Diesel-Hydraulic, May 45*; June 30*
Locomotives, Electric, June 24*
Ties, RS Concrete, Mar 25
USA-Europe Container Service, Feb 36*
Paris Metro Extension, July 37*
Freight Handling:
Coupled-in-Motion Weighing, Nov 40*
Swiss Rys. Modernize Basel-Muttenz Yard, Nov 43
Vastberga Road-Rail Terminal, Nov 38*
Freight Service:
Australian Rys. Improve, Jan 40; Oct 70*
Planning Freight Movements in USSR, Feb 42*
RRs' Challenge to Competitive Transportation, Jan 16*, et seq
Fried. Krupp Maschinenfabriken Essen, Locomotives Built by, May 40*
Frieseke & Hoepfner GmbH: Lukas Re-Railing and Pulling Equipment, May 60*

G

Gate, Hopper Car Discharge; Enterprise Ry. Equip. Co., Sept 47
Gates, Electronic Ticket; London Transport Board, June 56
Gaynes Eng. Co.: Shock Simulator for Impact Testers, Sept 47
Gebr. Crede & Co.: Double-Deck Baggage Car for German Federal Ry., May 49*
Generator, Deuta Werke AC, May 58
Germany:
East Germany:
German State Ry.:
Modernization of, Feb 31*
Motive Power and Rolling Stock, Feb 31*
Rail Equipment Exhibited at Leipzig Spring Fair, Mar 15
West Germany:
German Federal Ry.:
Advertising and Publicity Techniques, Apr 36
Cars, Freight and Passenger, May 49*
Electronic Seat Reservation System, Mar 46
High-Speed Train Tests, May 32*
Improvement of Friction Brake Shoes by the Use of Plastics, Dec 38*
Locomotive, 240-Hp. Diesel-Electric, Feb 41*
Locomotives, Diesel-Hydraulic, May 37*
Locomotives, Electric, May 47*
Mechanized Track Maintenance, Mar 28
"Rhinegold" Type Passenger Cars, Nov 59
Signaling Developments, May 30*
Specialized Equipment to Meet Competition, Jan 27*
Survey of, May 27*
Ties, Concrete, Mar 25*
USA-Europe Container Service, Feb 36*
Subway Systems in, May 35*
Survey of RR Equipment Builders, May 38*
Urban and Local Railways, May 35*
Girling Ltd.:
Anti-Wheel Skid Devices, Aug 54
Pulsing Track Circuit System, Apr 49*
Gloucester Ry. Carriage & Wagon Co. Ltd.:
Aluminum Insulated Container, Dec 42*
Gmeinder & Company GmbH, Locomotive Built by, May 38*
Grease, Heavy Duty; Revol Ltd., Sept 46
Great Britain:
Britannia Tubular Bridge Repaired, May 8
British Rys.:
Advertising and Publicity Techniques, Apr 36*
Car Control System, Jan 46; Mar 38
Car, Double-Deck, for Motor Vehicles, Nov 59
Cars, Passenger, June 46*
Creating a New Freight Image, Jan 29*
Data Processing Centers, Mar 60
Electrification Plans for Southern and Scottish Regions, Nov 50*
Euston Station Reconstruction, Nov 21*
Leapfrog Road-Rail System Uses Demountable Tanks, Aug 49
Liner Trains, Jan 36
Locomotive Simulator, June 71*
Microwave Link; York-Newcastle, Aug 50
Operating Deficit Cut in 1963, Feb 12; Mar 10
Plassermatic Track Maintenance Machines, Sept 7*
Policy of Labor Government Toward Railway Closures, Dec 54
Rail-Changing Machine, Mar 26*
Reshaping of Transport Policy, Apr 25
Roadrailer Data, Jan 46*; First Regular Service, Nov 13
Ties, Concrete, Use of, Mar 23*
Timetable Preparation by Computer, Mar 40
Uniforms for Train Crews, Feb 12*
Unit Trains, Types of, Jan 29*; June 56; Aug 15; Sept 7
Channel Tunnel Project, Apr 25*; Aug 15; Dec 34
Hovertrain Developments, Nov 13
Licences Acquired for French Safege Monorail System, June 69
London Transport Board:
Automated Subway Train, July 32*
Electronic Ticket Gates, June 56
Victoria Line Construction, July 31
Motor Carrier Tax Increase Sought, July 17
Port of London Authority Rail Services, Aug 28*
Rail and Road Costs Compared, July 17
"Railweight"; Coupled-in-Motion Weighing, Nov 42*

H

Hagenuk Oil Burners, May 62
Heaters, Switch; Pintsch Bamag, Apr 49*; May 75
Heating and Ventilating System; Vapor Corp., Oct 88
Hegenscheidt, Wilhelm, KG; Portable Wheel Lathe, May 66*
Henschel-Werke GmbH, Locomotives Built by, May 39*
Hibberd, F. C. & Co., Inc.: Off-Rail Shunter, Dec 50*
Honduras State Rys. Railcars, May 46*
Hong Kong: Growing Population May Call for More Passenger Facilities, Oct 60*
Hovertrain Developments in Britain, Nov 13
Hungary:
Budapest Subway, Status of the, July 30*
Silicon-Rectifier Electric Locomotives Produced at Ganz-Maveg Works, Mar 9

I

Impact Testers, Shock Simulator for; Gaynes Eng. Co., Sept 47
India:
Banaras Works Builds First Diesel Locomotive, Jan 6
Calcutta Suburban Electrification, Sept 24*, 50*
Chittaranjan Locomotive Works Builds First AC Electric Locomotive, Aug 37*
Railway Modernization Under Third Five-Year Plan, Aug 35*
Varanasi Locomotive Works on Schedule, Aug 38*
Indonesia:
Neglected RRs May be Overhauled, Oct 59*
South Sumatra Rys. Rehabilitated, Feb 12*; Oct 60
Insignias, RRs' Use of, Apr 31*
Insulation, Roadbed; Rockwool Aktiebolaget, Aug 56
Insulator, Glass-Fiber Section; British Insulated Callender's Cables, Feb 41*
Integra Ltd.:
All-Relay Interlocking, Feb 41*
Automatic Train Control with Speed Control, Feb 37
Interlocking, All-Relay; Integra Ltd., Feb 41*
International Ry. Equip. Corp.: Composite Breakdown Crane, Oct 78
International Union of Railways:
Coding, New, for Freight Cars, June 66
Cybernetics Symposium, Mar 36*
Iran: Plans for Rail Links with Turkey, Feb 14; May 19
Irish Transport Co.:
Cars, Passenger, June 49*
Results of Rehabilitation, Feb 14
Italy:
Milan Metro Nears Completion, July 34*; Dec 55
Plastic Tubing Useful in Building Freight Car Bodies Patented, Dec 53
Rapid Transit Proposed for Venice, Oct 78

J

Jack, Tamping; Tamper, Inc., June 57*
Jack, Track; Templeton, Kenly & Co., Sept 45*
Jamaica, Tourist Travel in, Sept 38*; Dec 53
Japan:
Hitachi Ltd. to Bid on U.S. Transit Cars, Feb 53
Japanese National Rys.:
Electronic Seat Reservation System, Mar 46
Modernization and Expansion Program, Oct 45*
Negishi Line Opened, Dec 46*
Tokaido Line:
Cost and Financing, Apr 12*; Oct 35
Description of, Oct 33*
Extensions Planned, Oct 44
Opening of, Oct 33*
Westerner Looks at, A, Oct 48*
Tunnel, Honshu-Hokkaido, Mar 15
Monorail Between Tokyo and Airport, June 70
Monorail Successfully Tested by Nihon Lockheed Monorail Co., Aug 58
Private Rys.:
Modernization and Expansion Program, Oct 50
Westerner Looks at, A, Oct 49*
Subway Operations and Construction, July 41*
Sumitomo Metal Industries Seeks AAR Approval to Sell Products in U.S., Jan 11
Tokyo Subway Construction, July 41*
Jeta, Inc.: Steel Cargo Containers, Sept 48
Jurid Werke GmbH: Development of Plastic Brake Blocks and Disc Brake Pads, Dec 38*

K

Kisha Seizo Kaisha, Ltd.: Wheel-Grinding Machine Trues Two Pair of Wheels at Once, Oct 43*
Klockner-Humboldt-Deutz AG, RR Equipment Built by, May 40*
Klockner-Werke AG: Cast Steel Switch, May 66
Knorr-Bremse GmbH: KE Air Brake System, Sept 44
Korean National Rys. Modernization Program, Oct 53*
Koyo Seiko Co. Ltd.: Spherical Roller Bearing, Dec 42*
Krauss-Maffei AG, Locomotives Built by, May 40*
Krupp-Ardelt GmbH:
Crane for Use on Electrified Lines, May 66*
Hopper Cars, May 50*
Kugelfischer Georg Schafer & Co.: Axially-Flexible Axle Bearings, May 68
Kullenbursten, Kullen & Co. KG: Mechanical Washing Plant, May 68

L

Lamco Joint Venture RR, Signaling the, June 36*
Latin American Free Trade Association: Recommendations of Railway Equipment Manufacturers in LAFTA Countries, Sept 60
Liberia: Signaling the Lamco Joint Venture RR, June 36*
Linke-Hofmann-Busch Double-Shell Tank Car, May 52*
Loading Gauges, African, June 34*
Locomotive Simulator for British Rys., June 71*
Locomotive Utilization in USSR Criticized, Sept 30
Locomotives:
Diesel-Electric:
Comparison with Diesel-Hydraulic, May 39
Finnish State Rys., Feb 20*
Netherlands Rys., Dec 28*
Rack, for Industrial Use, in Switzerland, Sept 25
Diesel-Hydraulic:
Comparison with Diesel-Electric, May 39
French National Rys. 4800-Hp., May 45*; June 30*
German Federal Ry., May 37*
German State Ry., Feb 31*
Southern Pacific U.S.-Built Units, Nov 28*
Yugoslav Builders' 600-Hp. and 1500-Hp. Units, Nov 35*
Electric:
Chittaranjan Locomotive Works Builds First AC Unit, Aug 37*
Czechoslovakian State Rys. Class E669, Aug 48*
French National Rys., June 24*
German Federal Ry., May 47*
German Manufacturers, Survey of, May 47*
German State Ry., Feb 33
Netherlands Rys., Dec 28*
Plastic Body Built in Czechoslovakia, Apr 11
Portuguese Rys. Stainless-Steel, Aug 32*
Spanish Nat. Rys. Dual-Voltage, Feb 30*
Towing Units for Panama Canal, Aug 40*
Norwegian State Rys. to Shift from Steam to Diesel and Electric by 1969, Nov 48*

Locomotives: (Continued)
Remote Control Operation:
Survey of Progress in, Apr 15*
Swedish Mine Trains, Apr 16*
Standard Diesel for Africa?, June 33*
Steam: German State Ry., Feb 31*
Lokomotiv-Export-Union, Locomotives Built by, May 40*
Lubricant, Diesel; Texaco Inc., Dec 42
Lubricant, Heavy-Duty; Revol Ltd., Sept 46
Lubricator, Rail and Flange; Tamper, Inc., June 61*
Luwa GmbH: Air Conditioning and Refrigeration Plants, May 72

M

Mahle AG: Piston Manufacturing Program, May 74
Maintenance of Equipment: Trackmobile Speeds Car Repairs, Mar 52*
Maintenance of Way, New Techniques in, Mar 23*
MaK Maschinenbau Kiel AG Locomotives, May 42*
Malaysia, Railway Operations in, Oct 57*
Maschinenfabrik Augsburg-Nurnberg AG (MAN) Diesel Engines, May 43*; Railcars, May 46
Maschinenfabrik Deutschland: Oil Pressure Aluminium Re-Railing Apparatus, May 74*
Maschinenfabrik Esslingen, Locomotives Built by, May 38; 6-Axle Well Car, May 52*
Matisa Automatic Lining Level Tamper, Dec 50*
Maybach-Motorenbau GmbH, Diesel Engines and Hydraulic Transmissions Produced by, May 43*
Mexico:
Diesels Benefit Pacific Ry. of Mexico, Aug 25
Trackmobile Speeds Car Repairs on Nat. Rys. of Mexico, Mar 52*
Microwave:
British Rys. York-Newcastle Link, Aug 50
Ovens on CN Dining Cars, Aug 50
Minden-Deutz 50 Car Truck, May 51*
Monorails:
British Group Acquires Licences for French Safege System, June 69
Line to Tokyo Airport, June 70
Nihon Lockheed System Successful, Aug 58
USSR Plans for, June 72
Motor Trucks: Do Heavy Trucks Pay Their Way?; AASHO Tests, Jan 35; European Comment on, Apr 25

N

Netherlands:
Netherlands Rys.:
Electrification, Dec 28*
Fixed Plant, Dec 31*
Link Planned with Channel Tunnel, Dec 34
Motive Power and Rolling Stock, Dec 28*
Operating Study, Dec 25*
Planning for the Future, Dec 34*
UFR and Kangourou Service, Jan 38
Wooing Nation's Manufacturers, Jan 38
Railway Manufacturing Industry, Dec 36*
Rotterdam Metro Under Construction, July 38
New Publications, Feb 16*; Mar 58
New Zealand Govt. Rys.:
Economic and Financial Rehabilitation, Sept 60
Train Used in Centennial, Feb 41*
Nomenclature, Railway, Oct 94
Norway:
Norwegian State Rys.:
To Shift from Steam to Diesel and Electric Operation by 1969, Nov 48*
Tunnel on Oslo-Drammen Line, Nov 47*
Operations Research Undertaken by Royal Norwegian Council for Scientific and Industrial Research, Mar 48
Oslo Underground Construction, July 36*
Patent on Trench Plough, May 82
Nuclear (See Atomic)

O

Oil Burners, Hagenuk, May 62
Operating Economies: How Diesels Benefit Mexico, Aug 25
Operating Studies:
Finnish State Rys., Feb 19*
German Federal Ry., May 27*
German State Ry., Feb 31*
Malmbanan Ore Railway, Aug 19*; Correction, Oct 92
Netherlands Rys., Dec 25*
Port of London Authority, Aug 28*
Yugoslav Rys., Nov 32*
Operations Research Undertaken by the Royal Norwegian Council for Scientific and Industrial Research, Mar 48
Ore-Carrying Railroads:
Malmbanan Ore Railway, Aug 19*; Correction, Oct 92
Sierra Leone Development Co., Aug 24
Orenstein-Koppel und Lubecker Maschinenbau AG: RR Equipment Built by, May 44*
Outlet, Pneumatic; ACF Industries, Apr 49*

P

Pan American Railway Congress (Eleventh), Aug 25
Panama Canal Electric Towing Locomotives, Aug 40*
Pandozy, G.: Ticket Machines, Sept 45
Pantograph Design, Changes in, Sept 42*
Passenger Business:
Canadian RRs Sell Seats Through Fare Reductions, Feb 26*
Japanese Rys. Prepare for Growth in, Oct 45*
Passenger Fares (See Fares)
Passenger Service:
Auto-Sleeper Service Booms in France, Nov 59
CN Improvements in, Feb 26*
Trans-Australian Speed-Up Planned, Oct 70*; Equipment, Nov 45*
PERT (Program Evaluation and Review Technique), Mar 48
Philippines, The:
Manila RR Operations, Oct 52
Philippine National Rys.:
Creation of, Sept 67; Oct 52*
Extensions to be Built by, Oct 52*
Philippine Ry. Operations, Oct 53
Piggyback (See Trailer-on-Flat-Car Service)
Pintsch Bamag AG: Propane Gas Switch Heating System, Apr 49*; May 75
Piston, Light Alloy; Mahle AG, May 74
Plastic-Bodied Electric Locomotive Built in Czechoslovakia, Apr 11
Plastic Crossing Gate in Belgium, Apr 25
Plastic Tubing Useful in Building Freight Car Bodies Patented in Italy, Dec 53
Plastics, Improvement of Friction Brakes by the Use of, Dec 38*
Plough, Trench Digging, Norwegian Patent on, May 82
Poland:
Polish State Rys.:
New Passenger Trains, July 22
Strives for Freight Speed-Up, July 50
Rolling Stock Production in, July 51
Port of London, Rail Operations at, Aug 28*
Portuguese Rys.: Stainless-Steel Electric Locomotives, Aug 32*
Pouget, Ets. Ed.: Coachscrewing Machine, Feb 49
Precision Systems Ltd.: Locomotive Simulator, June 71*
Public Image of Railroads:
Advertising and Publicity Techniques, Apr 34*
Identity by Design, Apr 31*
Publicity Techniques of European RRs, Apr 34*

R

Radio-Relay System; Lamco Joint Venture RR, June 36*
Rail:
Bochumer Verein, May 58
US Steel International Curvemaster, Sept 44
Welded, Machines for Laying, Mar 26*, 56
Rail and Flange Lubricator; Tamper, Inc., June 61*
Rail-Changing Machine; British Rys., Mar 26*
Rail-Highway Equipment:
British Rys. Leapfrog System Uses Demountable Tanks, Aug 49
British Rys. Roadrailer, Jan 46*; Nov 13
Trackmobiles in Mexico, Mar 52*
Rail Lifter, Cullen-Friestedt Multiple, Aug 53
Rail Sprayer; Ry. Maint. Corp., Dec 50*
Railroading After Hours with Jim Lyne, Feb 44*; Oct 94*; Nov 62*; Dec 58*
Railway Maintenance Corp.:
Car Jack, Dec 42*
Rail Sprayer, Dec 50*
Railway Supply Industry:
French Equipment Exhibition, June 21*
German Equipment Industry, May 38*
Netherlands Manufacturing Industry, Dec 36*
Polish Equipment Industry, July 51
Rumanian Rolling Stock Exports Rise, July 49
Yugoslav Equipment Industry, Nov 35*
Rapid Transit:
"Expo Express" for World Exhibition at Montreal, Nov 11
System Proposed for Venice, Oct 78
Urban Transit Boom, July 28*
Rate Brackets Proposed by EEC, Jan 22
Refrigerated Products, Aluminum Insulated Container for, Dec 42*
Refrigeration Plant; Luwa GmbH, May 72
Re-Railing Equipment:
Frieseke & Hoepfner, May 60*
Maschinenfabrik Deutschland, May 74*
Reservation Systems, Electronic, Mar 40; June 77; Nov 44*
Revol Ltd.: Heavy-Duty Grease, Sept 46
Rheinstahl Siegener Eisenbahnbedarf GmbH: 20-Axle Special Car for Transformers, May 52*
Rhodesia:
Rail Link with Tanganyika Studied, Jan 43
Rhodesia Rys.:
Government Agreement on, Mar 18
Line from Mbizi to Chiredzi, Nov 56*
Roadbed Insulation; Rockwool Aktiebolaget, Aug 56
Roadrailers on British Rys., Jan 46*; Nov 13
Robel & Co.: Track Maintenance Equipment, Feb 49*; May 76
Rockwool Aktiebolaget: Roadbed Insulation, Aug 56
Roller Bearing, Koyo Seiko Spherical, Dec 42*
Rumania: Rolling Stock Exports Rise, July 49
Russia (See Union of Soviet Socialist Republics)

S

Saw, Portable; Cengar Universal Tool Co., Feb 37*
Scales, Electronic Weighing-in-Motion, Oct 17; Nov 40*
Scheyer, Ing. Guido: Track Measuring Equipment, Aug 54
Seat Reservation Systems, Electronic, Mar 40; June 77
Shells, Pre-stressed Concrete, Used in Czechoslovakian Experimental Track, Mar 28*
Shock Simulator for Impact Testers; Gaynes Eng. Co., Sept 47
Shop, Locomotive; Varanasi Works, India, Aug 38*
Shunk Mfg. Co.: Steel-Coil Skid, Apr 49*
Shunter, Off-Rail; F. C. Hibberd & Co., Dec 50*
Sierra Leone Development Co. Upgrades It's Railway, Aug 24
Signaling:
Automatic, Danish State Rys. to Extend, Sept 10
German Signaling Developments, May 30*
JNR New Tokaido Line, Oct 38
Lamco Joint Venture RR in Liberia, June 36*
Skid, Steel-Coil; Shunk Mfg. Co., Apr 49*
Sleepers (See Ties)
Snow Blower, Switch Cleaning; Tamper, Inc., June 50*
South African Rys. & Harbours Upgrades Cape Town-Johannesburg Main Line, Sept 69
Spain:
Barcelona Subway System, July 30*
RR Sector of Economic Development Plan, July 55
Spanish National Rys.:
Locomotives, Dual-Voltage Electric, Feb 30*
Modernization Program, Sept 63
Talgo Trains, New, Sept 21*
Speed of Trains: German Fed. Ry. High-Speed Tests, May 32*
Spike Puller and Tie Renewer; Tamper, Inc., June 50*
Stainless-Steel Electric Locomotives; Portuguese Rys., Aug 32*
Stations, Passenger:
Euston Station, London; Reconstruction, Nov 21*
JNR Tokaido Line, Oct 41*
Netherlands Rys., Dec 31*
Steel Cutting Machine; British Oxygen Co. Ltd., Sept 44
Subways:
Brussels Tramways to be Converted to, Sept 7
ICOS-Veder Construction System, July 35*
Istanbul Plans for, Apr 46; May 23
Melbourne System, Surveys for, Sept 7
Milan Metro Nears Completion, July 34*; Dec 55
Survey of, July 30* (Europe), 41* (Japan), 43* (North America)
West German U-Bahn Systems, May 35*
Sudan Rys.: Problems Caused by Aswan High Dam, June 72
Suddeutsche Kuhlerfabrik Julius Fr. Behr.: Hydrostatic Fan Drives for Diesels, May 76*
Swaziland Ry. Nearing Completion, July 22
Sweden:
LKAB Co. to Automate Mine Train Operations, Apr 16*; CTC System, Oct 92
Malmbanan Ore Line Operations, Aug 19*; Correction, Oct 92
Stockholm Underground Extended, July 35*, 39; Tests Automatic Train, July 35
Swedish State Rys.:
Advertising and Publicity Techniques, Apr 34*
Passenger Car Modernization, Apr 19*
Train, Electro-Diesel Passenger, Sept 70
Tank Car for Two Products, Apr 48
Vastberga Road-Rail Freight Terminal, Nov 38*
Switch, Cast Steel; Klockner-Werke AG, May 66
Switch Heating System, Pintsch Bamag Propane Gas, Apr 49*; May 75
Switzerland:
Berne-Lotschberg-Simplon Passenger Cars, Apr 21*
Group Ordering by Private Railways, Sept 25
Locomotive, Diesel Rack, for Industrial Use, Sept 25
Sihltal Ry. Passenger Cars, Apr 21*
Swiss Federal Rys.:
Advertising and Publicity Techniques, Apr 50*
Basel-Muttenz Yard Modernized, Nov 43

T

Taiwan Ry. Operates Efficiently, Oct 54*
Tamper, Inc.: Maintenance Machines, June 50*
Tampers:
Matisa, Dec 50*
Tamper, Inc., June 50*, 61*, 74*
Tamping Jack; Tamper, Inc., June 57*
Tanganyika:
Rail Link with Rhodesia Studied, Jan 43
Railway Construction in, June 40
Technological Challenge, The, Jan 16*
Telefunken AG: Co-Axial Cable for 300 Speech Channels, May 78
Telephone System; Lamco Joint Venture RR, June 36*
Television to Help Speed Train Departures in Brussels, Oct 22
Templeton, Kenly Aluminum Track Jack, Sept 45*
Terminal, Vastberga Freight; Stockholm, Nov 38*
Texaco Inc.: Diesel Lubricant, Dec 42
Thailand State Rys.: Operations; Improvement Program, Oct 58*
Ticket Control System, Electronic; Ticket Equip. Ltd., Sept 46
Ticket Equip. Ltd.: Electronic Ticket Control System, Sept 46
Ticket Gates, Electronic; London Transport Board, June 56
Ticket Machines; G. Pandozy, Sept 45
Ticket Reservation Systems, Electronic, Mar 40; June 77
Tie Renewer and Spike Puller; Tamper, Inc., June 50*
Ties:
Concrete, Developments in, Mar 23*
Concrete; Dyckerhoff & Widmann, May 60
Czechoslovakian State Rys. Experiments with Pre-stressed Concrete Shells to Replace, Mar 28*
Steel, Developments in, Mar 23
Timetable Preparation by Computers, Mar 40
Track:
Czechoslovakian State Rys. Use Pre-stressed Concrete Shell, Mar 28*
JNR New Tokaido Line, Oct 36*
Technical Developments in, Mar 23*
Track Circuit System, Girling Pulsing, Apr 49*
Track Jack; Templeton, Kenly & Co., Sept 45*
Track Laying Machines:
Rail Changing Machine; British Rys., Mar 26*
Self-Propelled; CNR, Mar 32*
Straddle Vehicle; AT&SF, Mar 56
Track Layouts and Wheelsets; Bochumer Verein, May 58
Track Liner and Jack, Robel, Feb 49*
Track Maintenance and Building in USSR Criticized, Sept 28*
Track Maintenance Equipment, Robel, May 76

Track Maintenance Machines, Plassermatic, on British Rys., Sept 7*
Track Maintenance Package; Tamper, Inc., June 74*
Track Measuring Equipment; Ing. Guido Scheyer, Aug 54
Trackmobile Speeds Car Repairs in Mexico, Mar 52*
Trailer-on-Flat-Car Service: (See also Container Service)
Netherlands Rys. UFR and Kangourou Service, Jan 38
Plans I—V, on US Rys., Jan 44
Use in Europe Limited, Jan 23
Training of Africans for EAR&H, June 45
Trains: (See also Unit Trains)
British Rys. Liner Trains, Jan 36
British Rys. Push-Pull Services, Nov 51
Spanish National Rys. Talgo, Sept 21*
Trainsets:
Finnish State Rys., Feb 21*; Sept 35*
Netherlands Rys., Dec 30*
Trans-Europe Express Service, New Cars for, Apr 22*
Trucks, Car, Minden-Deutz 50, May 51*
Tuchel-Kontakt GmbH: Multi-Pole Contacts, May 78
Tunnels:
Channel (See English Channel Tunnel Project)
ICOS-Veder Construction System, July 35*
Immersed-Tube Construction System, July 38
JNR Honshu-Hokkaido, Mar 15
JNR New Tokaido Line, Oct 36
Norwegian State Rys.; Oslo-Drammen Line, Nov 47*
Paris Metro Construction, July 37*
Road-Rail, Under River Scheldt in Belgium, Mar 10; Oct 17
Victoria Line, London Underground, July 31
Turkey:
Plans for Rail Links with Iran, Feb 14; May 19
Subway Planned for Istanbul, Apr 46; May 23

U

US Steel International Curvemaster Rail, Sept 44
Uerdingen Railcars, May 46
Uganda, Railway Construction in, June 40
Underground Railroads (See Subways)
Uniforms, Train Crew; British Rys., Feb 12*
Union of Soviet Socialist Republics:
Criticism of Railroad Operations in, Sept 26*
Franco-Soviet Track Collaboration, Sept 34*
Lines to Siberia Planned, May 83
Map of Principal Railroads, Sept 31*
Monorail Plans, June 72
Moscow Metro Operations, July 36*
Planning Freight Movements, Feb 42*
Unit Train Types Used on British Rys., Jan 29*; June 56; Aug 15; Sept 7
United States:
Alertness Control Device, Aug 42
Atchison, Topeka & Santa Fe Straddle Vehicle for Unloading and Laying Welded Rails, Mar 56
Atchison, Topeka & Santa Fe Studies Atomic Blasting of Mountains, Sept 66
Atlantic Coast Line Centralized Data Processing Centre, Mar 33
Boston Mass Transport System Planned, July 58
Budd "International Car", Apr 22*
Chicago Transit Authority:
New Cars, July 42*
Skokie Swift Operation, July 42
Cleveland Transit System Operations, July 43
Coupled-in-Motion Weighing; International Railroads Weighing Corp., Nov 40*
New York Subway Developments, July 54
RRs' Weapons for Fighting Competitors, Jan 34*
Rapid Transit Developments in, July 54
San Francisco Bay Area Rapid Transit System, July 56*
Southern Pacific TOPS Data Processing System, Mar 33
Southern Pacific U.S.-Built Diesel-Hydraulic Locomotives, Nov 28*
Strick Trailer Co. Tests USA-Europe Container Service, Feb 36*
Western Pacific Electronic Information and Control System, Mar 37
Work Rules Dispute; Arbitration Board Report, Feb 54; June 82
Worthington Corp. to Acquire Alco Products, Oct 80

V

Valve, Dual-Use; Alan Cobham Eng., Sept 48
Valve, Outlet; ACF Industries, Apr 49*
Vapor Corp.:
Electronic Alertness Control Device, Aug 42
Ventilating and Heating System, Oct 88
Ventilating and Heating System; Vapor Corp., Oct 88
Viet-Nam Rys. Continue to Operate in Face of Staggering Obstacles, Oct 56
Voith Getriebe KG, Hydraulic Transmissions Developed by, May 44*

W

Waggon & Maschinenbau GmbH, Rolling Stock Built by, May 50*
Waggonfabrik Talbot Automatic Central Discharging Gondola Car, May 50*
Wagons (See Cars, Freight)
Washing Plant, Mechanical; Kullenbursten, Kullen & Co. KG, May 68
Waterways: Importance of Barge Transport in Europe, Jan 23*
Weighing, Coupled-in-Motion, Oct 17; Nov 40*
Welded Rail (See Rail: Welded)
Westinghouse Air Brake Co., Union Switch & Signal Div.: Short Stroke Retarder Cylinder, Sept 48*
Wheel-Grinding Machine Trues Two Pair of Wheels at Once; Kisha Seizo Kaisha, Oct 43*
Wheel Lathe, Heavy-Duty; Craven Brothers, Aug 54
Wheel Lathe, Portal; Wilhelm Hegenscheidt KG, May 66*
Wheel Skid Protection Devices, Girling, Aug 54
Wieger Maschinenbau GmbH: Ballast Regenerator, Feb 37*
Wire Mesh Guards; BRC Eng. Co., Oct 88*
World Poll: Capital Expenditure Programs for 1965, Dec 40

Y

Yard, Basel-Muttenz, Modernized by Swiss Rys., Nov 43
Yuasa Battery Co.: Pocket-Type Battery, Dec 42*
Yugoslavia:
Railway Supply Industry Tooling Up, Nov 35*
Yugoslav Rys.:
Modernization of, Nov 32*
Reconstruction of Sarajevo-Ploce Line, Feb 54

RAILWAY BOOKSHELF

Early Railways, Dec 48
Fugleflugtslinien—Die Vogelflugtlinie (The Bird's Flight Line), Feb 52
Geographical Digest, Feb 42
Great Railway Journeys of the World, Dec 51
Histoire des Chemins de Fer en France, June 78
Railways Under the Ground, Dec 48
Stationsgebouw van de Nederlandse Spoorwegen, Dec 51
Treinen (Spoorwegen van Stoom tot Stroom), Dec 51
Valtionrautatiet (Finnish State Railways) 1862-1962, Feb 52

Advertisers' Index Appears on Page 6

ADVERTISERS' INDEX

IFC (Inside Front Cover); IBC (Inside Back Cover)

AEG Allgemeine Electricitats Gesellschaft, Oct 71; Nov 29; Dec 19
Agpol Products (See Metalexport)
Alco Products, Inc., Jan 24-25; Feb 28-29; Mar 34-35; Apr 26-27; June 42-43; Sept 36-37; Dec 10
Armstrong Patents Co. Ltd., Feb 50; July 46
Associated Electrical Industries Export Ltd., Feb 48; Apr 46; June 74
Associated Electrical Industries-GRS Ltd., Jan 44; Mar 54; May 78; July 50
Automatic Telephone & Electric Co. Ltd., Oct 65

Beilhack, Martin, Maschinenfabrik und Hammerwerk GmbH, July 58
Bethlehem Steel Export Corp., Jan 4; Mar 49; May 6; July 7; Sept 6; Nov 6
Bolton Gate Co. Ltd., Jan 45; Mar 44; June 60; Oct 90
Brissonneau & Lotz, Feb 13; Apr 41; June 75; Aug 13; Oct 11; Dec 12
Brown, Boveri & Co. Ltd., Jan IBC; Mar 22; May 80; July 8; Sept 59; Nov 4
Budd Co., Feb 9; May 14-15; June 54-55; July 24-25

Cardwell-Westinghouse Co., Feb 18; Mar 41; June 8; Oct 79
Clevite Corp., Cleveland Graphite Bronze Div., July 16
Clyde Rubber Works Co. Ltd., July 52; Nov 53
Cockerill-Ougrée, Feb 17; Mar 53; July 27; Sept 16; Nov 22
Compagnie des Ateliers et Forges de la Loire, June 11
Comptoir Français des Produits Sidérurgiques, June 53
Constructora Nacional De Carros De Ferrocarril, S. A., Feb 6-7; Apr 28-29; June 18-19; Aug 6-7; Oct 62-63
Cowans, Sheldon & Co. Ltd., May 70; June 62; Sept 52; Oct 89; Nov 56
Craven Brothers (Manchester) Ltd., Apr 9; July 9; Oct 12
Cravens Ltd., Jan 31; Apr 45; July IBC; Oct 72
Crompton Parkinson Ltd., Feb 46; Mar 56; May 74; July 53; Sept 51; Oct 88
Cullen-Friestedt Co., Apr 3; June 81; Sept 58; Nov 18
Cummins Diesel International Ltd., May 10; June 51; July 4; Oct 75; Nov 7; Dec 44

Davey, Paxman & Co. Ltd., Jan 38; Mar 60; Aug 56; Sept 50; Nov 52; Dec 55
Deutsche Waggon- und Maschinenfabriken GmbH, May 20

Electric Tamper Export Co., Oct 92

Fate-Root-Heath Co.; Plymouth Locomotive Works, Jan 33; Apr IBC; June 56; Aug 55; Sept 64
Fédération des Industries Ferroviaries, June 13
Ferrostaal A. G., Apr 43; May 16; Oct 69
Flexible Drives (Gilmans) Ltd., May 62; June 64; Sept 49; Nov 50
Frieseke & Hoepfner GmbH, Jan 41; May 11; Oct 66; Dec 13
Fuji Iron & Steel Co. Ltd., Oct 20

Ganz-Mávag, Apr 7; June 15; Aug IBC; Oct 31
General Electric Co., May IBC; Sept IBC; Oct IBC; Nov IBC; Dec IBC
General Motors Overseas Operations, Jan IFC; Feb 3; Mar 11-14; Apr IFC; May IFC; June 3; July IFC; Aug 3; Sept IFC; Oct IFC; Nov IFC; Dec IFC
General Railway Signal Co., Jan 10-11; Mar 8-9; June 9; Nov 23
General Steel Industries, Feb IBC; Apr 39; June IBC; Aug 43; Oct 29; Dec 4
General Telephone & Electronics International, June 10; July 10; Aug IFC; Sept 20; Oct 10; Nov 55; Dec 3
Gmeinder & Co. GmbH, May 24
Grant, Lyon & Co. Ltd., Feb 52; May 82; Aug 53; Nov 58

Henschel-Werke A. G., May 7; Oct 67
Hitachi Ltd., Feb BC; Apr BC; June BC; Aug BC; Oct BC; Dec BC

Jurid Werke GmbH, Nov 30-31

Kalmar Verkstadsaktiebolag, Jan 13
Kawasaki Rolling Stock Manufacturing Co. Ltd., Oct 77
Kershaw Manufacturing Co., Inc., Jan 3; Mar 3; May 3; July 3; Sept 3; Nov 3
Kinki Rolling Stock Manufacturing Co. Ltd., Oct 85
Kisha Seizo Kaisha Ltd., Mar 44; Oct 77
Klöckner-Humboldt-Deutz A. G., Apr 47; May 73; Sept 53; Oct 4; Nov 14
Knorr-Bremse GmbH, May 55; June 44; Oct 8
Kowa Chemical Synthetic Co. Ltd., Oct 3
Krupp, Fried., Maschinenfabriken Essen, May 54
Kugelfischer Georg Schäfer & Co., May 71
Kyosan Electric Manufacturing Co. Ltd., Oct 91; Dec 56

Lokomotiv-Export-Union; Fried.Krupp—Krauss Maffei, May 59; July 47; Aug 10; Oct 24; Nov 9; Dec 15

MaK Maschinenbau Kiel GmbH, Apr 8; May 4
M.A.N. Maschinenfabrik Augsburg-Nürnberg A.G., Jan 30; Mar 51; May 63; July 45; Oct 21; Dec 16
MFD-Maschinenfabrik Deutschland A.G., May 61; July 49
Mahle Komm.-Ges., May 54; Dec 49
Manufacturers Equipment Co., Sept 68; Oct 93; Nov 60
Maschinenfabrik Esslingen, May 60
Matisa Matériel Industriel S.A., Jan 42-43; Feb 15; Mar 42-43; May 56-57; July 18-19; Aug 9; Sept 54; Oct 30, 61; Nov 15; Dec 7
Maybach-Motorenbau GmbH, Mar IFC; Apr 30; May 25; Oct 7; Nov 54; Dec 47
McGraw-Edison Co.; National Electric Coil Div., Feb 8; June 63; Oct 25
McGraw-Edison Co.; Thomas A. Edison Ind., Feb 44-45
Metalexport, June 81; July 55; Sept 69; Oct 89; Nov 53
Metropolitan-Cammell Carriage & Wagon Co. Ltd., Jan 12; Apr 6; June 67; Aug 12; Oct 27; Dec 22
Midas Export Co., Jan 40
Mills, James, Ltd., Exors. of, Jan 36
Miner, W. H., Inc., June 65; Oct 6
Mitsubishi Electric Corp., Oct 9

National Castings Co., Jan BC; Mar BC; May BC; July BC; Sept BC; Nov BC
Nederlandse Machinefabriek "Alkmaar," N.V., Dec 51
Nordberg Manufacturing Co., Mar 20-21; June 6-7; Oct 82-83
Nydqvist & Holm AB, Mar 55; Nov 61

Orenstein-Koppel und Lübecker Maschinenbau A.G., Mar 19; Apr 13; May 9; Sept 11; Oct 23; Nov 12

P & M Co. (England) Ltd., Mar 57; June 4; Sept 61; Dec 23
Persöner AB, June 70; Sept 47; Oct 86
N.V. Philips' Telecommunicatie Industrie, June 68; Sept 48; Dec 54
Pintsch Bamag A.G., May 81; June 73
Plasser & Theurer, Jan 14-15; Feb 43; Mar IBC; Apr 37; May 85; June IFC; July 6; Sept 17-19; Oct 13-15; Dec 43
Purdy Co., May 84; June 80; July 57

Reining, Heinrich, GmbH, June 58; Sept 66; Dec 49
Richards, Charles, & Sons Ltd., June 60; Sept 64; Dec 43
Robel & Co., Mar 52; May 72; Sept 52; Nov 8
Rolls-Royce Ltd., Jan 9; Mar 48; May 66; July 48; Sept 46; Nov 59

SIG—Schweizerische Industrie-Gesellschaft, Mar 7; June 17; Sept 65; Nov 57
SKF, Svenska Kullagerfabriken AB, Feb 38; Aug 47
Siemens & Halske A.G., May 67; Oct 73
Société d'Etudes Ferroviaires, Oct 80
Société MTE, June 14; Oct 28
Standard Telephones and Cables Ltd., Feb 47; Mar 4; May 21; Sept 15
Stream-Line Filters Ltd., Jan 39; Mar 59
Striegel Supply & Equipment Corp., Nov 60; Dec 57
Stucki, A., Co., June 78; Sept 60
Süddeutsche Kühlerfabrik Julius Fr. Behr, Feb 4; Apr 14; June 20; Aug 18; Oct 32; Dec 24
Sulzer Brothers Ltd., Jan 32; Mar 47; May 64; July 11; Sept 56; Nov 19
Sumitomo Metal Industries Ltd., Mar 45; Apr 4; May 77; June 79; July 23; Aug 11; Sept 55; Oct 81; Nov 16; Dec 17

Tamper Inc., Feb 10-11; June 76-77; Sept 62-63; Dec 52-53
Teikoku Seibyo Co. Ltd., Oct 92
Télécommunications Radioélectriques & Téléphoniques, Oct 78
Tempered Spring Co. Ltd., Jan 39; Mar 59; June 71; Aug 55; Oct 90
Timken Roller Bearing Co., Jan 6-7; Mar 16-17; May 12-13; July 26; Sept 12-13; Nov 10-11
Tokyo Shibaura Electric Co. Ltd., Feb IFC; Mar 39; May 69; July 15; Sept 57; Oct 26
Tokyu Car Manufacturing Co. Ltd., Oct 87
Toyo Denki Seizo K.K., Oct 64
Transandean Associates, Inc., Aug 4
Tuchel-Kontakt GmbH, May 68
Tyer & Co. Ltd., Jan 8; Mar 6; May 17; July 14; Sept 14; Nov 17

United Steel Companies Ltd.; Steel, Peech & Tozer Branch, Mar 50; June 57; Sept 45
United Steel Companies Ltd.; Workington Iron and Steel Company, Apr 44; May 75; June 61; July 51; Sept 67; Oct 76
United States Steel International, May 22-23; Nov 24-27

Valmet Oy, Feb 40; June 52; Dec 6
Vapor International, Feb 49; Mar 58; May 79; July 44; Aug 16; Sept 44; Nov 51
Voith Getriebe K.G., May 26; Oct 74; Dec 14
Vokes Ltd., May 53; June 16; Aug 17; Oct 68

Waggonfabrik Talbot, May 65
Waggonfabrik Uerdingen A.G., Dec 11
Waggon- und Maschinenbau GmbH. Donauwörth, May 72; Oct 85
Werkspoor, N.V., Jan 37; June 59; Aug 8; Dec 45
Westinghouse Air Brake Co., Union Switch and Signal Div., Apr 10-11; May 18-19; June 68-69; July 12-13; Aug 14-15; Sept 8-9; Oct 16-17; Nov 20-21; Dec 20-21
Whiting Corp., Feb 39; Apr 40; Sept 4; Oct 18-19; Dec 8-9
Wickham, D., & Co. Ltd., Jan 41; Mar 61; June 62; Oct 87
Wieger Maschinenbau GmbH, May 82
Wiseman, Alfred, & Co. Ltd., Feb 52; July 54; Oct 91
Woodings-Verona Tool Works, Mar 46; May 76; June 82; Aug 54; Oct 84; Dec 48
Workington Iron and Steel Co. (See United Steel Companies Ltd.)

Yawata Iron & Steel Co. Ltd., Oct 20
Yvac Co., Inc., Aug 57; Sept 68; Oct 93; Nov 60; Dec 57